UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,577	08/17/2001	Shinji Negishi	SON-2196	2196

7590 10/16/2007	EXAMINER
RADER, FISHMAN & GRAUER, P.L.L.C 1233 20th Street, NW, Suite 501 Washington, DC 20036	VAN HANDEL, MICHAEL P

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/931,577	NEGISHI ET AL.
	Examiner	Art Unit
	Michael Van Handel	2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2007*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52 and 78-94* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52 and 78-94* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 7/12/2007 has been entered.

Response to Amendment

1.   This action is responsive to an Amendment filed 7/12/2007. Claims **1-52, 78-94** are

pending. Claims **53-77** are canceled. Claims **78-94** are new.

Response to Arguments

1.   Applicant's arguments regarding claims **1, 14, 27,** and **40,** filed 7/12/2007, have been

considered, but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2.   Claims **1, 4-9, 14, 17-22, 27, 30-35, 40, 43-46, 78**, and **81-85** are rejected under 35

U.S.C. 102(a) as being anticipated by Applicant's admitted prior art (see corresponding

publication US 2002/0031188 for relevant citations).

Referring to claims **1, 14, 27, 40**, and **78**, Applicant's admitted prior art discloses a data

transmission system comprising:

- a transmitting apparatus that transmits a scene description (p. 1, paragraph 4; p. 2,

  paragraphs 15, 16, 18; & Fig. 20); and

- a receiving apparatus that constructs a scene according to said scene description (p. 1,

  paragraph 4; p. 2, paragraphs 15, 16, 18; & Fig. 20),

  o wherein said transmitting apparatus comprises a scene description processing

    means that transfers a scene description, which conforms to at least one of a

    transmission line state and a request issued from said receiving apparatus, and

    appends time information to said scene description (p. 2, paragraph 17);

  o wherein said receiving apparatus monitors said time information sent from

    said transmitting apparatus and detects a delay in transmission using said time

    information (p. 1, paragraph 10); and

  o wherein said scene description comprises at least one node and at least one

    signal used to construct said scene, each said node describing an object or a

    relationship between objects (inherent to the Binary Format for Scenes

    (BIFS)).

NOTE: The USPTO considers the applicant's "at least one of" language to be anticipated by any

reference containing any of the subsequent corresponding elements.

Referring to claims **4, 17, 30,** and **43,** Applicant's admitted prior art discloses a data transmission system/method according to claims 1, 14, and 27, respectively, wherein said scene description processing means encodes a scene description to produce said scene description and transfers said scene description (p. 2, paragraph 18).

Referring to claims **5, 6, 18, 19, 31, 32, 44, 45, 81,** and **82,** Applicant's admitted prior art discloses a data transmission system/method according to claims 1, 14, 27, 40, and 78, wherein:

- said transmitting apparatus includes a signal processing means that transfers one or more signals used to construct a scene, in accordance with said at least one of said transmission line state and said request issued form said receiving apparatus (p. 1, paragraph 5); and

- said scene description processing means transfers said scene description which conforms to a transmission rate used to transfer one or more signals by said signal processing means (p. 2, paragraph 18).

Referring to claims **7, 20, 33, 46,** and **83,** Applicant's admitted prior art discloses a data transmission system/method according to claims 1, 14, 27, 40, and 78, respectively, wherein:

- said transmitting apparatus comprises a signal processing means that transfers one or more signals used to construct a scene, which conform to said at least one of said transmission line state and said request issued from said receiving apparatus (p. 1, paragraph 5); and

- said scene description processing means transfers a scene description that specifies whether to use said one or more signals to construct a scene (p. 2, paragraph 18).

Referring to claims **8**, **21**, **34**, and **84**, Applicant's admitted prior art discloses a data transmission system/method according to claims 1, 14, and 27, respectively, wherein said scene description processing means transfers a scene description whose complexity conforms to said at least one of said transmission line state and said request issued from said receiving apparatus (p. 2, paragraph 18).

Referring to claims **9**, **22**, and **35**, Applicant's admitted prior art discloses a data transmission system/method according to claims 8, 21, and 34, respectively, wherein said scene description processing means transfers a scene description, in which a first scene part within a scene is replaced with a second scene part whose complexity differs from the complexity of the first part, in accordance with said at least one of said transmission line state and said request issued from said receiving apparatus (p. 1, 2, paragraph 13).

Referring to claim **85**, Applicant's admitted prior art discloses a data transmission system according to claim 78, wherein said scene description is comprised of a plurality of nodes arranged in a hierarchical relationship (inherent to MPEG-4 and BIFS)(p. 2, paragraph 15).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims **1-6**, **8-19**, **21-32**, **34-45**, **47-52**, **78-82**, and **84-94**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetro et al. in view of Radha et al.

Referring to claims **1, 14, 27, 40,** and **78,** Vetro et al. discloses a data transmission system comprising:

- a transmitting apparatus that transmits a scene description (col. 7, l. 44-53); and

- a receiving apparatus that constructs a scene according to said scene description (col. 7, l. 44-53),

  o wherein said transmitting apparatus comprises a scene description processing means that transfers a scene description, which conforms to at least one of a transmission line state and a request issued from said receiving apparatus (col. 8, l. 6-20 & col. 24, l. 11-28), and appends time information to said scene description (the examiner notes that timestamps are inherent to MPEG-4); and

  o wherein said scene description comprises at least one node and at least one signal used to construct said scene, each said node describing an object or a relationship between objects (inherent to MPEG-4)(col. 1, l. 45-53 & col. 11, l. 16-20).

Vetro et al. further discloses a model predictor that provides real-time feedback regarding the dynamics of the network, including packet loss ratios within the network, to efficiently transcode the video content (col. 8, l. 6-12). Vetro et al. does not specifically disclose having the receiving apparatus monitor the time information sent from the transmitting apparatus and detecting a delay in transmission using the time information. Radha et al. discloses a system that provides a re-transmission framework with a time-delay budget constraint for packet loss recovery in a real-time Internet MPEG-4 video session (col. 2, l. 58-65). The decoder buffer in the receiver uses the PES layer time stamps in the video stream to detect whether a packet is lost and needs to be

retransmitted (col. 11, l. 66-67 & col. 12, l. 1-52). It would have been obvious to one of ordinary

skill in the art to modify the system of Vetro et al. to monitor PES time stamps to detect whether

a packet is lost and needs to be retransmitted, such as that taught by Radha et al. in order to

provide a decoder buffer that implements a packet lost recovery mechanism (Radha et al. col. 2,

l. 38-44).

NOTE: The USPTO considers the applicant's "at least one of" language to be anticipated by any

reference containing any of the subsequent corresponding elements.

Referring to claims **2, 15, 28, 41**, and **79**, the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, 40, and 78,

respectively, further comprising a memory means in which a plurality of predefined scene

descriptions are stored, wherein said scene description processing means selects said scene

description from among the plurality of scene descriptions stored in said memory means, and

transfers said scene description (Vetro et al. col. 23, l. 8-17, 26-30, 38-67; col. 24, l. 8-22; & Fig.

13).

Referring to claims **3, 16, 29**, and **42**, the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, and 40, respectively,

further comprising a memory means in which a plurality of predefined scene descriptions is

stored, wherein said scene description processing means converts a predefined scene description

read from said memory means into said scene description, and transfers said scene description

(Vetro et al. col. 24, l. 23-28).

Referring to claims **4, 17, 30, 43**, and **80**, the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, 40, and 78,

respectively, wherein said scene description processing means encodes a scene description to

produce said scene description and transfers said scene description (Vetro et al. col. 12, l. 5-28).

Referring to claims **5, 6, 18, 19, 31, 32, 44, 45, 81,** and **82,** the combination of Vetro et al.

and Radha et al. teaches a data transmission system/method according to claims 1, 14, 27, 40, .

and 78, wherein:

- said transmitting apparatus includes a signal processing means that transfers one or

  more signals used to construct a scene, in accordance with said at least one of said

  transmission line state and said request issued from said receiving apparatus (Vetro

  et al. Fig. 6); and

- said scene description processing means transfers said scene description which

  conforms to a transmission rate used to transfer one or more signals by said signal

  processing means (Vetro et al. Fig. 6).

Referring to claims **8, 21, 34, 47,** and **84,** the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, 40, and 78,

respectively, wherein said scene description processing means transfers a scene description

whose complexity conforms to said at least one of said transmission line state and said request

issued from said receiving apparatus (Vetro et al. Fig. 6).

Referring to claims **9, 22, 35,** and **48,** the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 8, 21, 34, and 47, respectively,

wherein said scene description processing means transfers a scene description, in which a first

scene part within a scene is replaced with a second scene part whose complexity differs from the

complexity of the first scene part, in accordance with said at least one of said transmission line

state and said request issued from said receiving apparatus (Vetro et al. col. 12, l. 5-28 & Fig. 6).

Referring to claims **10, 23, 36,** and **49,** the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 8, 21, 34, and 47, respectively,

wherein said scene description processing means transfers a scene description, with which a

scene part within a scene is removed or a new scene part is added to the scene, in accordance

with said at least one of said transmission line state and said request issued from said receiving

apparatus (Vetro et al. col. 12, l. 1-3).

NOTE: The USPTO considers the applicant's "at least one of" language to be anticipated by any

reference containing any of the subsequent corresponding elements.

Referring to claims **11, 24, 37,** and **50,** the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 8, 21, 34, and 47, respectively,

wherein said scene description processing means modifies a quantization step, at a which a scene

description is encoded, in accordance with said at least one of said transmission line state and

said request issued from said receiving apparatus (Vetro et al. col. 12, l. 63; col. 13, l. 33-67; col.

14, l. 1-67; & col. 15, l. 1-5).

Referring to claims **12, 25, 38,** and **51,** the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, and 40, respectively,

wherein said scene description processing means divides a scene description into a plurality of

decoding units in accordance with said at least one of said transmission line state and said

request issued from said receiving apparatus, and then transfers the resultant scene description

(Vetro et al. col. 7, l. 62-67; col. 8, l. 1-5, 28-32; col. 11, l. 54-61; & col. 12, l. 5-20).

Referring to claims **13**, **26**, **39**, **52**, and **93**, the combination of Vetro et al. and Radha et

al. teaches a data transmission system/method according to claims 12, 25, 38, 51, and 91,

respectively, wherein said scene description processing means adjusts a time interval between

time instants at which said receiving apparatus decodes each of the plurality of decoding units

into which a scene description is divided (Vetro et al. col. 14, l. 41-67 & col. 15, l. 1-8).

Referring to claim **85**, the combination of Vetro et al. and Radha et al. teaches a data

transmission system according to claim 78, wherein said scene description is comprised of a

plurality of nodes arranged in a hierarchical relationship (inherent to MPEG-4)(Vetro et al. col.

17, l. 31-35).

Referring to claim **86**, the combination of Vetro et al. and Radha et al. teaches a data

transmission system according to claim 85, wherein said scene description is modified in

accordance to a transmission capacity, by adjusting the hierarchical relationship between at least

one node and at least one of said one or more signals (removing an object removes it from the

hierarchy)(Vetro et al. col. 15, l. 7-8).

Referring to claims **87** and **88**, the combination of Vetro et al. and Radha et al. teaches a

data transmission system according to claim 78, wherein said nodes comprise at least one

variable property, wherein said variable property is comprised of at least one of a predefined

value, a reference identifying a signal, or another node and wherein said scene description is

modified based on the transmission capacity by changing at least one variable property of at least

one node in said scene description (col. 12, l. 55-67; col. 13, l. 1-67; col. 14, l. 1-67; col. 15, l. 1-

67; & col. 16, l. 1-67).

Referring to claim **89**, the combination of Vetro et al. and Radha et al. teaches a data transmission system according to claim 78, wherein said nodes comprise at least one variable property, wherein said variable property is comprised of at least one of a reference identifying a signal (col. 15, l. 66-67; col. 16, l. 1-3; & col. 20, l. 54-60), or another node.

Referring to claim **90**, the combination of Vetro et al. and Radha et al. teaches a data transmission system according to claim 78, wherein said scene description is comprised at least one node defining at least one object position in a scene (inherent to MPEG-4).

Referring to claim **91**, the combination of Vetro et al. and Radha et al. teaches a data transmission system according to claim 78, wherein said scene description is modified based on the transmission capacity by changing at least one variable property of at least one node in said scene description, wherein said variable property is changed to remove a reference to a first signal (col. 17, l. 1-6).

Referring to claim **92**, the combination of Vetro et al. and Radha et al. teaches a data transmission system according to claim 78, wherein said scene description is further modified based on the transmission capacity by changing at least one variable property of at least one node in said scene description by adding a reference to a second signal (col. 10, l. 45-48).

Referring to claim **94**, the combination of Vetro et al. and Radha et al. teaches a data transmission system according to claim 91, wherein said scene description processor adjusts the transmission capacity based on a time interval between time instants at which said receiving apparatus decodes each of the plurality of decoding units (col. 12, l. 15-28 & col. 24, l. 25-28).

3.   Claims **7**, **20**, **33**, **46**, and **83**, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Vetro et al. in view of Radha et al. and further in view of Deutsch et al.

Referring to claims **7**, **20**, **33**, **46**, and **83**, the combination of Vetro et al. and Radha et al.

teaches a data transmission system/method according to claims 1, 14, 27, 40, and 78,

respectively, wherein:

-        said transmitting apparatus comprises a signal processing means that transfers one or

more signals used to construct a scene, which conform to said at least one of said

transmission line state and said request issued from said receiving apparatus (Vetro et

al. Fig. 6); and

The combination of Vetro et al. and Radha et al. does not specifically teach that transferring a

scene description that specifies whether to use said one or more signals to construct a scene.

Deutsch et al. discloses an MPEG-4 system that allows a content provider to design an MPEG-J

data stream that is transmitted to a user with an MPEG-4 stream (col. 4, l. 63-67 & col. 14, l. 13-

24). The MPEG-J application allows a local scene graph manager to turn off portions of a scene

graph of MPEG-4 content in view of limited local processing, memory or bandwidth resources

(col. 4, l. 15-18 & col. 10, l. 20-34) at the user's multimedia data processing system (col. 8, l. 33-

35). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify the combination of Vetro et al. and Radha et al. to include an MPEG-J

application that allows a local user system to turn off portions of an MPEG-4 scene graph in light

of the system's capabilities, such as that taught by Deutsch et al. in order to allow content

creators to embed complex control mechanisms with in their media data to intelligently manage

the operation of an audio-visual session (Deutsch et al. col. 4, l. 1-5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571-272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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